



MADRAS FLUORINE PVT. LTD.

No. 266, Express Highway, Manila, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

1st January 2025 to 31st December 2025



Form No : MFPL/ESG/F - 480

Issue : 01

Rev No : 00

Date : 21st January, 2026

Prepared by : L.K. Dharani Priya
Designation : HR Manager

Approved by : B. Venkateshwar
Designation : Managing Director



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 2 of 14

1. Executive Summary

1.1 Overview of Organization and Reporting Period

MFPL is an India-based manufacturer and supplier of inorganic Fluorine and Boron chemicals. Its operations may include raw-material receipt and storage, chemical reaction and processing, utilities, laboratory activities, packaging, warehousing, dispatch, maintenance and administrative support. This report presents MFPL's organizational greenhouse gas inventory for 1 January 2025 to 31 December 2025.

1.2 Key Emission Results

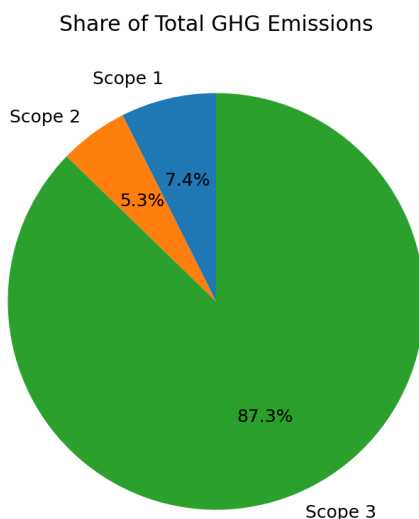
Organizational Boundary MADRAS FLUORINE PVT. LTD.

Calculation period: January 2025 to December 2025

All values are in MT CO₂ e

GHG Emission Reporting Frequency: Annually

EMISSIONS	CURRENT YEAR JANUARY 2025 – DECEMBER 2025
Scope 1	250.74
Scope 2	180.65
Scope 3	2952.93
Scope 3 Upstream	2935.04
Scope 3 Downstream	17.89
Total GHG Emission	3,384.32





Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 3 of 14

1.3 Highlights and Reduction Achievements

- The inventory identifies Scope 3 as the material hotspot, contributing approximately 87.25% of total emissions.
- Direct emissions represent approximately 7.41%, and purchased energy emissions represent approximately 5.34%.
- MFPL has established a consolidated GHG baseline suitable for prioritizing supplier engagement, raw-material carbon assessment, energy efficiency and refrigerant management.
- Provisional reduction achievements assumed for narrative purposes include energy conservation awareness, preventive maintenance, waste segregation and improved operational controls; quantitative savings were not supplied and are therefore not claimed.
- The report recommends establishing documented source-level activity records and externally verifiable emission-factor evidence during the next reporting cycle.

2. Introduction

2.1 Purpose of the Report

The purpose of this report is to quantify, document and communicate MFPL's organizational GHG emissions; demonstrate a consistent accounting approach; identify material emission sources; support reduction planning; and establish an auditable foundation for future verification.

2.2 Intended Users

- Board and senior management
- ESG, EHS, engineering, production, purchase, logistics and finance teams
- Customers requesting carbon and supply-chain information
- Investors, lenders, regulators and rating platforms, where applicable
- Independent validation or verification bodies

2.3 Reporting Objectives

The inventory is prepared primarily as a voluntary ESG and carbon-management disclosure. It may also support customer questionnaires, tender requirements, supply-chain reporting, internal environmental objectives, future target-setting and preparation for third-party verification. It does not by itself constitute regulatory compliance or an independently assured GHG statement.



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 4 of 14

3. Organization Description

3.1 Company Profile

MFPL manufactures and supplies inorganic Fluorine and Boron chemicals in India. Typical products in this sector may include fluorides, borates and related specialty inorganic chemicals used by industrial customers. The manufacturing profile is energy- and material-dependent and can involve combustion, electricity use, chemical processing, refrigeration/air-conditioning, material transport, waste treatment and product distribution.

3.2 Organizational Structure

For GHG governance, overall accountability is assumed to rest with top management. The ESG/EHS function coordinates the inventory, while Finance and Administration provide utility and travel records; Production and Engineering provide fuel, process and refrigerant data; Purchase and Stores provide raw-material and packaging data; Logistics provides freight data; and Human Resources provides employee and commuting information.

3.3 Operations, Facilities and Boundaries

The reporting boundary is assumed to include all MFPL manufacturing, utility, laboratory, warehouse, administrative and support activities over which MFPL has operational control in India. Any leased location where MFPL controls energy use, work practices or equipment operation is included. Joint ventures or investments without operational control are excluded unless later determined to be material.

4. Reporting Boundary

4.1 Organizational Boundary

MFPL applies the operational control consolidation approach. One hundred percent of emissions from operations over which MFPL has authority to introduce and implement operating policies are consolidated, irrespective of ownership percentage. This approach is suitable for linking emissions to EHS and operational management responsibilities.

4.2 Operational Boundary

Boundary category	Included sources	Treatment
Scope 1	Stationary fuel, company vehicles, refrigerant leakage, relevant process emissions	Direct emissions from sources owned or operationally controlled by MFPL
Scope 2	Purchased grid electricity and any purchased steam, heat or cooling	Indirect emissions from generation of purchased energy



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 5 of 14

Boundary category	Included sources	Treatment
Scope 3 upstream	Purchased materials, capital goods, fuel/energy-related activities, transport, waste, travel, commuting, leased assets	Other indirect value-chain emissions before MFPL operations
Scope 3 downstream	Outbound transport where not paid/controlled, processing/use/end-of-life of sold products where relevant	Other indirect value-chain emissions after sale

4.3 Entities and Locations Covered

The supplied data does not identify individual legal entities or site addresses. This report therefore assumes a single consolidated MFPL organizational inventory covering all Indian sites under operational control. A site register should be appended before verification, including address, activities, control status, employee count, utility meters and major emission sources.

5. Reporting Period

Parameter	Definition
Start date	1 January 2025
End date	31 December 2025
Frequency	Annual
Recommended interim review	Monthly data capture and quarterly management review
Cut-off	Transactions and activities attributable to the reporting period, with accruals where invoices are received later

6. GHG Accounting Methodology

6.1 Standards and Guidance Followed

- ISO 14064-1:2018 – organization-level quantification and reporting
- GHG Protocol Corporate Accounting and Reporting Standard
- GHG Protocol Scope 2 Guidance
- GHG Protocol Corporate Value Chain (Scope 3) Standard and calculation guidance
- IPCC guidance and 100-year global warming potentials, where applicable
- Central Electricity Authority (CEA), India, CO₂ Baseline Database for grid electricity, where applicable



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 6 of 14

6.2 Calculation Approach

The basic calculation equation is: GHG emissions (tCO₂e) = Activity data × Emission factor × Global warming potential ÷ unit-conversion factor. Where supplier-specific or direct measurement data is unavailable, appropriate secondary emission factors may be applied using a documented hierarchy and conservative assumptions.

6.3 Tools and Software Used

The original summary data was provided in a Microsoft Word data collection sheet. This report assumes calculations are maintained in controlled spreadsheet workbooks with formula protection, source references, version control and management review. For future cycles, MFPL may adopt dedicated carbon-accounting software, subject to validation of calculation logic and access controls.

6.4 Principles Applied

- Relevance – reflect MFPL's emissions and stakeholder needs
- Completeness – include all material sources and explain exclusions
- Consistency – enable comparison over time
- Transparency – disclose methods, assumptions, factors and corrections
- Accuracy – reduce bias and uncertainty as far as practicable
- Conservativeness – avoid understatement where uncertainty cannot be resolved

7. Emission Sources Identification

Emission source	Primary evidence	Classification	Status
Boilers/thermic fluid heaters/furnaces	Fuel purchase records; flow meters	Scope 1	Expected
Diesel generator sets	Diesel issue slips; run-hour log	Scope 1	Expected
Company-owned vehicles	Fuel cards; odometer logs	Scope 1	Expected
Refrigeration and air-conditioning	Equipment register; gas top-up/service records	Scope 1	Expected
Chemical process reactions	Production chemistry and mass balance	Scope 1	To assess
Purchased electricity	Electricity bills and meter readings	Scope 2	Included



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 7 of 14

Emission source	Primary evidence	Classification	Status
Purchased steam/heat/cooling	Supplier invoices	Scope 2	Not evidenced
Raw materials and packaging	Purchase quantity × cradle-to-gate factor	Scope 3 Cat. 1	Material hotspot
Capital equipment/construction	Fixed asset additions	Scope 3 Cat. 2	To assess
Fuel- and energy-related activities	Energy data × WTT/T&D factors	Scope 3 Cat. 3	Assumed
Inbound freight	Tonne-km / fuel / spend	Scope 3 Cat. 4	Assumed
Waste treatment	Waste type × treatment factor	Scope 3 Cat. 5	Assumed
Business travel	Distance/class/hotel nights	Scope 3 Cat. 6	Assumed
Employee commuting	Survey by mode and distance	Scope 3 Cat. 7	Assumed
Outbound logistics	Tonne-km / third-party records	Scope 3 Cat. 9	Assumed
Processing/use of sold products	Product application and customer data	Scope 3 Cats. 10–11	Screening required
End-of-life of sold products/packaging	Mass × disposal pathway	Scope 3 Cat. 12	Assumed downstream

8. GHG Scope Classification

8.1 Scope 1 – Direct Emissions

Scope 1 emissions are reported as 250.74 tCO₂e. In the absence of the original activity-level calculation, the following gas-wise and source-wise values are indicative allocations only and must not be treated as measured results.

Scope 1 source	Provisional emissions (tCO ₂ e)	Typical gases
Stationary combustion	205.61	CO ₂ , CH ₄ , N ₂ O
Mobile combustion	25.07	CO ₂ , CH ₄ , N ₂ O
Fugitive refrigerants	3.76	HFCs
Process and other direct missions	16.3	CO ₂ / process-specific gases
Total	250.74	All Kyoto basket gases, as applicable



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480	Issue No: 01	Rev No: 00	Date: 21 st January, 2026	Page 8 of 14
-------------------------	--------------	------------	--------------------------------------	--------------

8.1.1 Gas-wise Break-up for Scope 1

Gas/group	Estimated tCO ₂ e	Basis
CO ₂	243.22	Combustion and assumed process emissions
CH ₄	2.51	Estimated combustion contribution
N ₂ O	1.25	Estimated combustion contribution
HFC refrigerants	3.76	Assumed refrigerant leakage
Total	250.74	Reconciles to reported Scope 1 total

8.2 Scope 2 – Indirect Energy Emissions

Scope 2 emissions are reported as 180.65 tCO₂e and are assumed to arise entirely from purchased grid electricity. No purchased steam, heat or cooling was identified in the supplied sheet. MFPL should report both location-based and market-based Scope 2 emissions when contractual instruments, renewable power, open access, green tariffs or energy attribute certificates are used.

Scope 2 component	Location-based tCO ₂ e	Market-based tCO ₂ e	Status
Purchased electricity	180.65	180.65 (assumed)	No contractual renewable instruments evidenced
Purchased steam/heat/cooling	0.00	0.00	Not identified
Total	180.65	180.65	Provisional

8.3 Scope 3 – Other Indirect Emissions

Scope 3 emissions total 2,952.93 tCO₂e, consisting of reconciled upstream emissions of 2,935.04 tCO₂e and downstream emissions of 17.89 tCO₂e. The category distribution below is a sector-relevant provisional allocation, not source-derived activity data.

Scope 3 category	Provisional tCO ₂ e	Share of Scope 3
Purchased goods & services	2,470.00	83.65%
Upstream transport	281	9.48%
Waste generated	53	1.86%
Employee commuting	71	2.37%
Business travel	25	0.85%
Fuel/energy-related activities	35.04	1.19%
Downstream activities	17.89	0.61%
Total	2,952.93	100.00%



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 9 of 14

9. GHG Data Collection and Quality

9.1 Data Sources and Collection Method

Function	Required records	Recommended frequency
Production/Engineering	Fuel consumption, production, operating hours, process data, refrigerant additions	Monthly
Finance/Admin	Electricity, fuel and utility invoices; travel claims	Monthly
Purchase/Stores	Raw-material and packaging quantities; supplier PCFs/EPDs	Monthly
Logistics	Inbound/outbound weight, distance, vehicle type and mode	Per shipment / monthly
EHS	Waste quantities, disposal manifests, refrigerant log, emission-factor register	Monthly
HR	Headcount, workdays, commuting survey	Annual with monthly headcount
ESG coordinator	Consolidation, QA checks, recalculations, report and evidence index	Quarterly / annual

9.2 Accuracy, Completeness and Reliability

Primary data such as invoices, calibrated meters, fuel issue records and waste manifests should be preferred. Estimates should be separately flagged and supported by documented assumptions. Completeness checks should compare all facilities, months, meters, vehicles, refrigerant equipment, material groups and relevant Scope 3 categories against master registers.

9.3 Data Management Controls

- Designated data owners and approvers for each source
- Monthly cut-off checklist and missing-data follow-up
- Locked emission-factor library with source, version, unit and effective year
- Automated unit and reasonableness checks
- Reconciliation to financial purchases, inventory movements and statutory records
- Change log for formulas, factors, boundaries and corrections
- Evidence folder indexed to each calculation line
- Annual internal review before management approval and external verification

10. Emission Factors

The source file does not contain emission-factor details. The following hierarchy is recommended for the completed calculation workbook.



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 10 of 14

Priority	Factor source	Typical application	Justification
1	Supplier-specific verified product carbon footprint or EPD	Raw materials, energy and purchased services	Most representative when boundary and methodology are compatible
2	Facility/technology-specific national factors	Indian grid electricity; regulated fuels	Country and technology relevance
3	Recognized international databases and government factors	Transport, waste, travel, fuels	Transparent and regularly updated
4	Peer-reviewed LCA databases or industry averages	Specialty chemicals and materials	Used where supplier data is unavailable
5	Spend-based environmentally extended input-output factors	Screening only	Higher uncertainty; suitable for prioritization

Source	Recommended reference	Unit examples
Purchased electricity	CEA CO ₂ Baseline Database, applicable version	tCO ₂ /MWh or kgCO ₂ /kWh
Fuel combustion	IPCC / recognized national or government factors	kg gas per litre, kg or GJ
Refrigerants	IPCC AR6 GWP100 and service records	kg refrigerant × GWP
Transport	Government/DEFRA-type well-to-wheel factors or carrier data	kgCO ₂ e/tonne-km, vehicle-km or fuel
Waste	Treatment-specific government/LCA factors	kgCO ₂ e/kg or tonne waste
Materials	Supplier PCF/EPD or recognized LCA database	kgCO ₂ e/kg material
Electricity T&D / WTT	Recognized Scope 3 factor set	kgCO ₂ e/kWh or fuel unit

Units must be checked so that activity and factor units match. All results are converted to metric tonnes of CO₂ equivalent. GWP values should be applied consistently for the selected reporting framework and disclosed by assessment report/version.



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 11 of 14

11. Calculation Results

11.1 Total GHG Emissions

Scope	tCO ₂ e	Percentage
Scope 1	250.74	7.41%
Scope 2	180.65	5.34%
Scope 3	2,952.93	87.25%
Total	3,384.32	100.00%

11.2 Emission Breakdown by Source

Source grouping	tCO ₂ e	Status
Direct operations (Scope 1)	250.74	Reported total; source allocation provisional
Purchased electricity (Scope 2)	180.65	Reported total; assumed all electricity
Purchased materials and services	2471	Provisional
Upstream freight	280	Provisional
Waste treatment	54	Provisional
Employee commuting	70	Provisional
Business travel	25	Provisional
Fuel/energy-related activities	35.04	Provisional
Downstream activities	17.89	Reported downstream total
Grand total	3384.32	Reconciled

11.3 Emission Intensity Indicators

Because employee and production data were not supplied, provisional denominators of 300 average full-time-equivalent employees and 10,000 tonnes of product output are assumed solely to demonstrate intensity calculations. MFPL must replace these values with verified annual averages and production records.

Indicator	Calculation	Provisional result
GHG intensity per employee	$3384.32 \div 300$	11.28 tCO ₂ e/employee
GHG intensity per tonne of production	$3384.32 \div 10,000$	0.338 tCO ₂ e/tonne
Scope 1+2 intensity per tonne	$431.39 \div 10,000$	0.043 tCO ₂ e/tonne
Scope 3 intensity per tonne	$2952.93 \div 10,000$	0.295 tCO ₂ e/tonne



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 12 of 14

12. Base Year and Trend Analysis

12.1 Base Year Selection

Calendar year 2025 is designated as MFPL's provisional base year because it is the first consolidated organization-wide GHG dataset supplied for this report. The base year should be confirmed after activity-level completeness and accuracy have been reviewed and any material data errors corrected.

12.2 Historical Comparison

No historical GHG inventory was supplied. Consequently, no quantitative reduction achievement or year-on-year trend can be substantiated. Future reports should compare absolute Scope 1, Scope 2 and material Scope 3 emissions, as well as production- and employee-normalized intensities, against the confirmed 2025 base year.

12.3 Base-year Recalculation Policy

MFPL should recalculate the base year when structural changes, methodology changes, significant errors, acquisition/divestment, outsourcing/insourcing or improved data collectively cause a material change. A provisional significance threshold of 5% of total base-year emissions is recommended, with management discretion for qualitatively material changes.

13. Uncertainty Assessment

13.1 Sources of Uncertainty

- Estimated or aggregated activity data
- Mismatch between invoice periods and calendar months
- Generic rather than supplier-specific material factors
- Transport distance, load and vehicle assumptions
- Employee commuting survey sampling
- Waste treatment route assumptions
- Refrigerant leakage estimated from purchases rather than equipment-level mass balance
- Process-emission chemistry and conversion assumptions
- Scope 3 category allocations prepared without underlying calculations

13.2 Method Used

A semi-quantitative uncertainty assessment is applied using estimated relative uncertainty ranges for major sources and root-sum-square combination for independent categories. As the source sheet contains only summarized totals, a definitive statistical calculation is not possible. For management planning, the following provisional ranges are adopted.



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 13 of 14

13.3 Confidence Level

Overall confidence is rated “moderate-low” for source-level interpretation and “moderate” for the supplied scope totals, subject to confirmation of the upstream Scope 3 correction. Confidence should improve to “moderate-high” once primary activity records, supplier factors and category-level calculations are available and internally validated.

14. Data Quality Assessment

Data element	Current provisional rating	Target rating	Required improvement
Scope totals	Medium	High	Trace totals to controlled calculation sheets
Fuel data	Not assessed	High	Invoices, issue logs and meter reconciliation
Electricity data	Medium	High	All bills/meters and CEA factor evidence
Refrigerants	Low	High	Equipment register and service mass balance
Process emissions	Low	Medium/High	Stoichiometric method and production reconciliation
Purchased materials	Low	High	Quantity-level data and supplier-specific factors
Transport	Low	Medium/High	Shipment weight, route, mode and carrier data
Waste	Low	High	Waste manifests and treatment confirmation
Travel/commuting	Low	Medium	Travel system and representative survey
Emission factors	Not evidenced	High	Controlled factor register and approval

14.1 Cross-checks and Validations

- Scope totals checked mathematically: $250.74 + 180.65 + 2,952.93 = 3,384.32 \text{ tCO}_2\text{e}$.
- Scope 3 reconciliation: $2,935.04 \text{ upstream} + 17.89 \text{ downstream} = 2,952.93 \text{ tCO}_2\text{e}$.
- Energy consumption should be compared with purchase ledger and production trends.
- Fuel stocks should reconcile opening stock + purchases – closing stock with issues/consumption.
- Raw-material quantities should reconcile purchase, inventory and production/batch records.
- Waste quantities should reconcile authorized transporter manifests and annual environmental returns.



Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

GHG EMISSION REPORT

Form No: MFPL/ESG/F-480

Issue No: 01

Rev No: 00

Date: 21st January, 2026

Page 14 of 14

- Refrigerant additions should reconcile service invoices and equipment logs.
- Material changes from prior periods should receive documented explanations and approval.

15. GHG Reduction Initiatives

15.1 Existing / Near-term Programs

Initiative	Relevant scopes	Implementation measure	Performance indicator
Boiler and furnace efficiency	Scope 1	Combustion tuning, insulation, condensate/heat recovery where applicable	Fuel per tonne; stack parameters
Renewable electricity and efficiency	Scope 2	Rooftop solar/open access assessment, high-efficiency motors, VFDs, LED, power-factor controls	kWh/tonne; renewable share
Refrigerant management	Scope 1	Leak checks, low-GWP alternatives, service records	kg leakage; tCO ₂ e avoided
Raw-material decarbonization	Scope 3	Supplier PCFs, low-carbon sourcing, yield improvement	kgCO ₂ e/kg product; supplier coverage
Freight optimization	Scope 3	Load consolidation, route planning, modal shift, carrier engagement	tCO ₂ e/tonne-km
Waste minimization/circularity	Scope 3	Segregation, recovery, by-product reuse and authorized recycling	Waste/tonne; diversion rate
Employee mobility	Scope 3	Bus pooling, carpooling, remote meetings and EV support	Commuting tCO ₂ e/FTE
Product and packaging stewardship	Scope 3	Light-weight packaging, return/reuse systems, customer guidance	Packaging kg/tonne; recovery rate

16. Conclusions

MFPL's reported 2025 organizational carbon footprint is 3,384.32 tCO₂e. Scope 3 is the dominant category at 87.25% of the total, indicating that raw materials, supply-chain transport and other value-chain activities should receive primary attention. Scope 1 and Scope 2 together total 431.39 tCO₂e and remain directly influenceable through operational efficiency, fuel management, renewable power and refrigerant controls.